

## ABSTRACT

Disclosed herein are exemplary embodiments of an improved Inductively Coupled Plasma (ICP) chamber which is externally coupleable to a processing chamber to monitor processes gases therefrom. The disclosed ICP chamber design is beneficial because it allows for the porting of reference gases for the purpose of performing actinometry, and/or allows for the introduction of plasma probes into the plasma within the ICP chamber, both of which improve the reliability of process gas concentration determinations. Also disclosed is a processing system for interfacing the ICP chamber to the processing chamber and for controlling both.